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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/215,095	12/18/1998	NATHANIEL T. BECKER	GC507-2	7801

5100 7590 12/05/2002

GENENCOR INTERNATIONAL, INC.  
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EXAMINER

BORIN, MICHAEL L

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 12/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/215,095

Applicant(s)

Becker et al

Examiner

Michael Borin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Sep 23, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 66-100 is/are pending in the application.
- 4a) Of the above, claim(s) 70, 71, and 77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66-69, 72-76, and 78-100 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## **DETAILED ACTION**

### ***Continued examination under 37 CFR 1.114 after final rejection***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/21/02 has been entered.

### ***Status of claims***

2. Claims 66,83 are amended. Claims 99,100 are added. Claims 66-69, 72-76, 78-100 are under examination. Claims 70, 71, 77 remain withdrawn from consideration as drawn to non-elected species.

### ***Claim Rejections - 35 USC § 112, first paragraph.***

3. Claims 66-69, 72-76, 78-100 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed

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invention. Base claims 66, 83 are amended to introduce new matter as they use the term "non-fibrous" in regard to polysaccharide. Applicant asserts that the amendment is supported by p. 2, lines 14-19 (which a part of Background section and is not disclosing the instant invention), and page 8, lines 1 and 13-15. None of these pages provide support for the term "non-fibrous".

5. Claims 66-69, 72-76, 78-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Arnold et al. (US Patent 5,324,649).

The instant claims are drawn to a granule comprising a seed particle, and a matrix layer comprising protein mixed with sugar and polypeptide. Further, the matrix may contain a synthetic polymer (e.g., vinyl polymer), and the either the core or the granule can have coating (e.g., vinyl polymer or cellulose derivative).

**Arnold**

The reference teaches enzyme-containing granules which comprise a core having a seed particle in it (col. 4, line 13), and protein (enzyme) matrix surrounding it (col. 5-6). The enzyme matrix contains, besides the enzyme itself, other peptides

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and proteins (col. 5, line 36,37)<sup>1</sup>. In addition, proteins, such as casein, albumin, etc. may be used as adjunct ingredients (col. 7, last paragraph). The enzyme can be selected, for example, from proteases, amylases, lipases, cellulases. Further, the enzyme layer comprises plastisizers, such as sugars or sugar alcohols (col. 6, lines 13,14). Further, both the core and the enzyme layer can contain coating comprising a vinyl polymer or vinyl copolymer. Also, synthetic polymer, such as PVA can be added to the enzyme matrix (col. 5, lines 53-55).

Arnold does not specifically teach use of polysaccharides. However, the reference teaches that the granules may contain adjunct ingredients, in particular enzyme protective agents. Thus, it would be obvious to add to enzyme matrix an enzyme protective agents. Selection of various enzyme protective agents would be obvious to an artisan. One of often used enzyme stabilisers is starch. See, for example, US 5,254,287 (col. 4, line 22), or US 5,260,074 (col. 1, lines 51-54). Addition of starch to granules disclosed in Arnold will result in the invention as instantly claimed. As for intended use of polysaccharide as "structuring agent",

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<sup>1</sup>No patentable weight is given to intended use limitation "structuring agent" as related to a polypeptide.

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motivation in the prior art to combine references need not be identical to that of the applicant to establish obviousness. In re Kemps, 40 USPQ2d 1309 (Fed. Cir., 1996).

If there are any differences between Applicant's claimed granules and that of the prior art, the differences would be appear minor in nature. Selection of particular enzymes, cellulose derivatives as fillers, and barrier layer materials would be obvious for an artisan to be achieved in a way of ordinary optimization.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Borin whose telephone number is (703) 305-4506. Dr. Borin can normally be reached between the hours of 8:30 A.M. to 5:00 P.M. EST Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Woodward, can be reached on (703) 308-4028. The fax telephone number for this group is (703) 305-3014.

Any inquiry of a general nature or relating the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

MICHAEL BORIN, PH.D  
PRIMARY EXAMINER

November 27, 2002

mlb

